

FEATURING BEST PRACTICES OF STATE AGENCIES AND INSTITUTIONS OF THE COMMONWEALTH OF VIRGINIA

Value Engineering

Value Engineering Program

**Virginia Department of Transportation
implemented this best practice
in July 1990**

*Qualifying under the
Best Practices catalogue*

2 Acquire Resources
22 Conduct research and development
222 Design products and services

Best Practice Summary (how it works, how you measure it)

Value Engineering (VE) is a systematic, creative approach to obtain optimum value for every dollar spent. It is an orderly review and analysis process conducted by a team of experienced engineers and technicians. The unique feature of the VE methodology is the focus on the function of a project or process. At the Virginia Department of Transportation, plans for all highway construction and maintenance projects with estimated costs of over \$2 million are subject to a VE study during the plan design process. Multi-disciplined teams consider all aspects of the planned project, identify the function of the project and its major components, and develop recommendations to improve the value of accomplishing those functions within the context of the project. Success is measured by cost avoidance, the number of recommendations

submitted and approved, and the non-financial benefits accruing to the project, such as safety improvement and reduced environmental impact.

Impact on the Process Organizational Performance (OUTCOMES)

The VE process identifies areas of value improvement (cost avoidance and/or function and quality improvement) which can be applied to the project under consideration as well as future projects. The methodology is versatile and can be applied to any project or program, including organizational design and process improvement.

In addition to the direct benefits, VE encourages cross-training of staff members by using specialists in different disciplines in a small group environment to solve problems and develop recommendations. Many of these specialists have never had an opportunity to work closely together before participating on a VE team.

Since being implemented by VDOT in July 1990, the VE program has conducted over 630 studies, with approximately 53% of all recommendations being accepted. Total cost avoidance as of October 1999 was \$259 million. The program recorded a return of investment of approximately \$72 for every dollar spent to operate the program.

Best Practice Qualification

The VDOT VE program has received numerous national and state awards. National awards were presented by the:

- Federal Highway Administration
- American Association of State Highway and Transportation Officials
- SAVE International "The Value Society" (VE professional organization)

On the state level, VDOT awarded the VE Program the 1999 "Commissioner's Award for Excellence."

The program has been the subject of articles in the SAVE International publication Value World, the journal of Virginia government Virginia Review, and several articles in Value Digest. The VE staff has been invited to present to national conferences, several state transportation departments, and localities within Virginia.

For Additional Information

Management Services Division
[Virginia Department of Transportation](#)
1401 East Broad Street
Richmond, VA 23219

Ron F. Garrett, CVS
(804) 796-4501
garrett_rf@vdot.state.va.us

Larry D. Jones
Management Services Division Administrator
(804) 786-7712